

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A dual frame buffer system, comprising:
a first frame buffer divided into a plurality of regions;
a second frame buffer to store data used to refresh a display monitor; and
a controller to identify ~~at least one~~ each region of the first frame buffer including updated data and to simultaneously copy data within ~~the~~ each identified region to both the second frame buffer and to the display monitor as the data within ~~the~~ each respective, identified region is needed to refresh the display monitor, wherein at least one identified region includes both an updated portion of data and an unupdated portion of data.
2. (Previously Presented) The dual frame buffer system claimed in claim 1, wherein the controller coordinates refresh of the display monitor using data stored in the second frame buffer and data updated within the first frame buffer.
3. (Original) The dual frame buffer system claimed in claim 1, further comprising:
a first address generator corresponding to the first frame buffer;
a second address generator corresponding to the second frame buffer; and
a timing generator for coordinating the timing between the first and second address generators for refreshing the display monitor.
4. (Previously Presented) The dual frame buffer system claimed in claim 3, further comprising:
a detector to detect when an update is made to the data in the first frame buffer; and
a decoder to identify the region including the updated data.
5. (Previously Presented) The dual frame buffer system claimed in claim 4, wherein each of the plurality of regions are sized to enclose a block of pixels.
6. (Previously Presented) The dual frame buffer claimed in claim 5, wherein the controller transmits the identified region from the first frame buffer to the second frame buffer and the display monitor when the display is refreshed.

7. (Original) The dual frame buffer claimed in claim 1, wherein the first frame buffer is part of a unified memory architecture.

8. (Cancelled)

9. (Currently Amended) A unified memory architecture system comprising: a unified memory including a main memory and a primary frame buffer memory divided into a plurality of regions;

a secondary frame buffer memory to store data used to refresh a display monitor; and a controller to identify at least oneeach region of the primary frame buffer memory including updated pixel data and simultaneously copy pixel data within theeach identified region to both the secondary frame buffer memory and to the display monitor as the pixel data within theeach respective, identified region is needed to refresh the display monitor, wherein at least one identified region includes both an updated portion of data and an unupdated portion of data.

10. (Previously Presented) The system claimed in claim 9, wherein the controller further coordinates refresh of the display monitor using pixel data stored in the secondary frame buffer memory and pixel data updated within the primary frame buffer memory.

11. (Original) The system claimed in claim 10, further comprising: a primary address generator corresponding to the primary frame buffer memory; a secondary address generator corresponding to the secondary frame buffer memory; and a timing generator for coordinating the timing between the primary and secondary address generators for refreshing the display monitor.

12. (Previously Presented) The system claimed in claim 11, further comprising: a detector to detect when an update is made to the pixel data in the primary frame buffer memory; and

a decoder to identify the region including the updated pixel data.

13. (Previously Presented) The system claimed in claim 12, wherein of the plurality of regions are sized to enclose a block of pixels.

14. (Previously Presented) The system claimed in claim 13, wherein the controller transmits the region containing the updated pixel data from the primary frame buffer memory to the secondary frame buffer memory and the display monitor when the display monitor is refreshed.

15. (Currently Amended) A method of refreshing a display, comprising:
identifying, within a first frame buffer memory divided into a plurality of regions, ~~at least one~~
each region including updated data;
refreshing a display monitor using data contained within a second frame memory buffer;
and
simultaneously copying data within ~~the~~each identified region of the first frame buffer memory to both the second frame buffer memory and to a display monitor as the data within ~~the~~
each respective, identified region is needed to refresh the display monitor, wherein at least one
identified region includes both an updated portion of data and an unupdated portion of data.

16. (Cancelled)

17. (Previously Presented) The method claimed in claim 15, further comprising:
detecting when an update is made to the pixel data in the first frame buffer memory; and
decoding the region including the updated pixel data.

18. (Previously Presented) The method claimed in claim 15, wherein each of the plurality of regions are sized to enclose a block of pixels.

19. (Previously Presented) The method claimed in claim 18, further comprising:
transmitting those regions containing the updated pixel data from the first frame buffer memory to the second frame buffer memory when the display is refreshed.

20. (Cancelled)

21. (Currently Amended) A computer product for refreshing a display, comprising:
first computer readable program code embodied in a computer usable medium to cause a computer to identify, wherein a first frame buffer memory divided into a plurality of regions, ~~at least~~each one region including updated data;

second computer readable program code embodied in a computer usable medium to cause a computer to refresh a display monitor using data contained within a second frame memory buffer; and

third computer readable program code embodied in a computer usable medium to cause a computer to simultaneously copy data within ~~the~~each identified region of the first frame buffer memory to both the second frame buffer memory and to the display monitor as the data within ~~the~~each respective, identified region is needed to refresh the display monitor.

22. (Cancelled)

23. (Previously Presented) The computer product claimed in claim 21, further comprising:

third computer readable program code embodied in a computer medium to cause a computer to detect when an update is made to the pixel data in the first frame buffer memory; and

fourth computer readable program code in a computer usable medium to cause a computer to decode the region including the updated pixel data.

24. (Previously Presented) The computer program claimed in claim 21, further comprising:

third computer readable program code embodied in a computer usable medium to cause a computer to partition the first frame buffer memory into the plurality of regions, each region sized to enclose blocks of pixels.

25. (Previously Presented) The computer produced claimed in claim 21, further comprising:

third computer readable program code embodied in a computer usable medium to cause a computer to transmit those regions containing the updated pixel data from the first frame buffer

memory to the second frame buffer memory and the display monitor when the display monitor is refreshed.

26-30 (Cancelled)